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Robertson

Docket No.: 20136-00305-US
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Roy C. (deceased), Flaker, et al.

Application No.: 09/588,351

Group Art Unit: 2815

Filed: June 7, 2000

Examiner: J. Fenty

For: CIRCUIT AND METHODS TO IMPROVE THE
OPERATION OF SOI DEVICES

RESPONSE

Commissioner for Patents
Washington, DC 20231

Dear Sir:

In response to the Office Action dated October 22, 2002, favorable reconsideration of the application is requested.

Claims 6-15 are pending in the application.

Claim 15 is withdrawn from consideration.

Withdrawal of the rejection of claims 6-14 under 35 U.S.C. § 102(e) as being anticipated by Voldman (U.S. Pat. No. 6,074,899) is requested.

The cited reference to Voldman describes a ESD protection device for SOI semiconductor structures. The ESD elements discharge an externally applied high voltage to prevent damage to circuitry connected to an input pin of the device.

Voldman describes with respect to Figs. 6-10 both a bulk diode (80, 102, 152) and various bipolar devices (105) and MOSFET (154) which can be used to discharge any externally applied electrostatic voltage as a protection device against damage from the externally applied electrostatic potential.

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The present invention is not directed to protecting the device from externally applied high voltages, but for enhancing the speed of SOI devices such as memory devices. The method comprises (per claim 6) a pulse discharge circuit which discharges any accumulated potential on the body of the SOI device. Per claim 9, the body is selectively grounded to dissipate any electric charge accumulated in the body to improve performance of the device. In accordance with rejected claims 11 and 14, a pulse generator was used to generate a pulse which closes a conductive path from the body of the SOI device to a reference point for discharging the accumulated charge. Per claim 14, the step for generating a pulse discharging the accumulated charge occurs before reading an output of the SOI device. In this way, the speed of the device can be enhanced by removing any charge which may accumulate on the body.

It is clear that Voldman does not provide for a pulse generator of any type, to discharge any accumulated potential. In accordance with the present invention, the pulse generator is applied deliberately to a circuit to lower the potential on the body of the device. Nowhere in Voldman does the ESD protection circuitry have any pulse generator. The Voldman device discharges an electric charge occurring on an input pin, so that it does not reach a circuit component in the device thereby preventing damage to the circuit component. The discharge, as noted previously, occurs on an input pin rather than on the body of any circuit element within the device.

As the reference fails to disclose or suggest these steps of the rejected claims, the reference cannot anticipate nor render obvious the subject matter of the claims.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue.

Dated:

1/10/03

Respectfully submitted,

By 

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TRANSMITTAL LETTER

Commissioner for Patents
Washington, DC 20231

Dear Sir:

Enclosed are the following items for filing in connection with the above-referenced Patent Application:

1. Response.

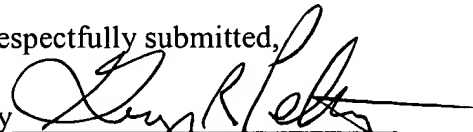
The Commissioner is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 22-0185, under Order No. 20136-00305-US. A duplicate copy of this paper is enclosed.

Dated:

1/10/03

Respectfully submitted,

By


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